

Disseminating underutilized species as a foundation of resilient farming system

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Context of the Action

Considering plant diversity the foundation of agro-ecological principles, there is a need to preserve and share a large plant biodiversity and to continuously enrich genetic banks to design more diversified and resilient farming systems. Plant diversity can also contribute to improving the nutritional value of home gardens. Germplasm conservation and dissemination are challenging due to the high cost of seed bank maintenance, farmers limited access to good quality storage facilities, lack of knowledge and know-how of the key operators, and the lack of specific market demands for secondary crops and cover/relay crops.



Objectives of the Action

- Preserve and maintain seed banks and biodiversity.
- Empower smallholder farmers on seed production.
- Disseminate knowledge and know-how on the use of underutilized species and cover/relay crops.
- Share under-utilized species with smallholder farmers and development practitioners.

Legumes	14	Arachis pintoi	Grasses	1	Brachiaria brizantha
	15	Arachis repens		2	Brachiaria decumbens
	16	Cajanus cajan		3	Brachiaria humidicola
	17	Canavalia ensiformis		4	Brachiaria ruziziensis
	18	Centrosema pascuorum		5	Brachiaria mullato
	19	Crotalaria juncea		6	Brachiaria mutica
	20	Crotalaria ochroleuca		7	Eleusine coracana
	21	Crotalaria atropubens		8	Zea mays
	22	Crotalaria zanzibarica		9	Panicum maximum
	23	Desmodium intortum		10	Pennisetum typhoides
	24	Desmodium ovalifolium		11	Pennisetum purpureum
	25	Dolichos lablab		12	Sorghum bicolor
	26	Glycine max		13	Tripsacum laxum
	27	Macroptilium bracteatum	Others	38	Amaranthus cruentus
	28	Macrotyloma axillare		39	Corchorus capsularis
	29	Mucuna pruriens		40	Hibiscus cannabinus
	30	Neonotonia wightii		41	Hibiscus sabdariffa
	31	Pueraria phaseoloides		42	Sesamum indicum
32	Sesbania grandiflora	43	Helianthus annuus		
33	Sesbania rostrata				
34	Stylosanthes guianensis				
35	Vigna radiata				
36	Vigna umbellata				
37	Vigna unguiculata				

Genetic bank at the Conservation Agriculture Training Center

- Preserving and sharing over 50 species and over 330 cultivars of staple, cash crops and underutilized species.
- Providing training for smallholder farmers and development practitioners.
- Sharing seeds across the country: 9 tons of seeds will be shared with smallholder farmers and development practitioners in 2018.

Empowering smallholder farmers seed into the production of cover crops

In Battambang and Kampong Cham provinces, 12 farmers produce seeds of cover crops covering 34 ha with

- Crotalaria juncea*
- Crotalaria ochroleuca*
- Stylosanthes guianensis*
- Centrosema pascuorum*
- Sesbania sp.*
- Sorghum* and *Pearl millet*.

Sharing plant diversity, enhancing soil fertility and diversifying farming systems



Around the Tonle Sap lake

In rainfed lowland of the Tonle Sap Lake Region in Cambodia, rice productivity is usually low.. Animal husbandry is one of the main components of the rice farming systems. In Banan District (Battambang 4 villages), farmers expect to establish 150 ha of cover crops after wet season rice with for most of them a collective management implementing large blocks.

Cover crops will be used for three main purposes: improvement of the soil fertility, use of cover crops as cattle feed and seed production of cover crops (*sunnhemp* and *Crotalaria ochroleuca* mainly).

There is huge opportunity to produce grains and protein in the dry season on the residual soil moisture transforming the land management in the dry season with a better integration of animal husbandry.



In the uplands of Battambang

Cover crops are also shared with smallholder farmers in the uplands of Rattanak Mondoul (Battambang) with sowing of sunnhemp or other cover crops prior maize for example. Sunnhemp is then rolled down and maize direct seeded the same day into the mulch.

